

United States Environmental Protection Agency
Region 10
Park Place Building, 13th Floor
1200 Sixth Avenue, WD-134
Seattle, Washington 98101

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. §1251 et seq; the "Act"),

CYPRUS THOMPSON CREEK
P.O. BOX 62
Clayton, Idaho 83227

is authorized to discharge from a facility located 35 miles southwest of Challis, Idaho, to receiving waters named Buckskin Creek, Pat Hughes Creek, and Bruno Creek, in accordance with discharge points, effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective

This permit and the authorization to discharge shall expire at midnight,

Signed this day of

Director, Water Division, Region 10
U.S. Environmental Protection Agency

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I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Specific Limitations and Monitoring Requirements.

1. During the period beginning on the effective date of this permit, and lasting until the expiration date, discharges from outfalls #001 and #002 shall be limited and monitored by the permittee as specified below:

Effluent Parameter	Effluent Limitation		Monitoring Requirements	
	Daily Avg. (mg/l)	Daily Max. (mg/l)	Frequency	Sample Type
Flow	---	---	Daily	----
Total Suspended Solids (TSS)	20.0	30.0	Weekly	Grab
Arsenic	---	0.490	Monthly	Grab
Cadmium	---	0.0053	Monthly	Grab
Lead	---	0.017	Monthly	Grab
Mercury	---	non-detectable	Monthly	Grab
Copper	---	0.0245	Monthly	Grab
Zinc	---	0.165	Monthly	Grab

(NOTE: All metals shall be analyzed as total recoverable.)

- a. The pH shall not be less than 6.0 standard units, nor greater than 9.0 standard units, and shall be monitored weekly by grab samples.
 - b. There shall be no discharge of floating solids or visible foam in other than trace amounts.
 - c. Samples taken in compliance with the monitoring requirements specified above shall be taken in the effluent stream below the settling basins.
2. During the period beginning on the effective date of this permit, and lasting until the expiration date, discharges from outfall #003 is authorized. The permittee shall monitor turbidity (above and below the Bruno Creek access road stormwater settling ponds) weekly during February 1 to June 30, and monthly for the other months of the year. This monitoring shall be performed in accordance with requirements of the water quality monitoring program as required by Part I.A.3. below.
3. In addition to the above referenced effluent monitoring requirements, the permittee shall continue to provide for water quality monitoring in accordance with the program agreed upon by the U.S. Forest Service (USFS), Idaho Department of Health and Welfare - Division of Environment (IDHW-DOE) and Cyprus, and such future modifications as may be mutually agreed upon by the parties. Instream monitoring results shall be reported quarterly (in March, June, September and December) to EPA and IDHW-DOE at the address given in Part II.C. below.

B. Definitions.

1. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
2. "Maximum daily discharge limitation" means the highest allowable "daily discharge."
3. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
4. A "Grab" sample is a single sample or measurement taken at a specific time or over as short a period of time as is feasible.
5. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
7. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

- A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under Part I shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.
- B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- C. Reporting of Monitoring Results. Monitoring results shall be summarized each month on the Discharge Monitoring Report (DMR) form (EPA No. 3320-1). The reports shall be submitted monthly and are to be postmarked by the 10th day of the following month. Legible copies of these, and all other reports, shall be signed and certified in accordance with the requirements of Part IV.H., Signatory Requirements, and submitted to the Director, Water Division and the State agency at the following addresses:

original to: United States Environmental Protection Agency (EPA)
Region 10
1200 Sixth Avenue, WD-135
Seattle, Washington 98101

copy to: Idaho Department of Health and Welfare (IDHW)
Division of Environment
Statehouse
Boise, Idaho 83720

- D. Additional Monitoring by the Permittee. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.
- E. Records Contents. Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) analyses were performed;
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and
 6. The results of such analyses.
- F. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time. Data collected on-site, copies of Discharge Monitoring Reports, and a copy of this NPDES permit must be maintained on-site during the duration of activity at the permitted location.
- G. Twenty-four Hour Notice of Noncompliance Reporting.
1. The following occurrences of noncompliance shall be reported by telephone within 24 hours from the time the permittee becomes aware of the circumstances:
 - a. Any noncompliance which may endanger health or the environment;
 - b. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Part III.G., Bypass of Treatment Facilities.);
 - c. Any upset which exceeds any effluent limitation in the permit (See Part III.H., Upset Conditions.); or
 - d. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit to be reported within 24 hours.

2. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected; and
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 3. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Compliance Section in Seattle, Washington, by phone, (206) 442-1213.
 4. Reports shall be submitted to the addresses in Part II.C., Reporting of Monitoring Results.
- H. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for Part II.C. are submitted. The reports shall contain the information listed in Part II.G.2.
- I. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:
1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

III. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- B. Penalties for Violations of Permit Conditions.
1. Civil Penalty. The Act provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be subject to a civil penalty, not to exceed \$25,000 per day for each violation.
 2. Criminal Penalties:
 - a. Negligent Violations. The Act provides that any person who negligently violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or by both.
 - b. Knowing Violations. The Act provides that any person who knowingly violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be punished by a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or by both.
 - c. Knowing Endangerment. The Act provides that any person who knowingly violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. A person which is an organization shall, upon conviction of violating this subparagraph, be subject to a fine of not more than \$1,000,000.
 - d. False Statements. The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this Act, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both.

Except as provided in permit conditions in Part III.G., Bypass of Treatment Facilities and Part III.H., Upset Conditions, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Removed Substances. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

G. Bypass of Treatment Facilities:

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section.
2. Notice:
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part II.G., Twenty-four Hour Notice of Noncompliance Reporting.
3. Prohibition of bypass.
 - a. Bypass is prohibited and the Director may take enforcement action against a permittee for a bypass, unless:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under paragraph 2 of this section.
 - b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 3.a. of this section.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under Part II.G., Twenty-four Hour Notice of Noncompliance Reporting; and
 - d. The permittee complied with any remedial measures required under Part III.D., Duty to Mitigate.
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

- I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

IV. GENERAL REQUIREMENTS

- A. Changes in Discharge of Toxic Substances. Notification shall be provided to the Director as soon as the permittee knows of, or has reason to believe:
1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 ug/l);
 - b. Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).
 2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - a. Five hundred micrograms per liter (500 ug/l);
 - b. One milligram per liter (1 mg/l) for antimony;
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).
- B. Planned Changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29(b); or
 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Part IV.A.1.

- C. Anticipated Noncompliance. The permittee shall also give advance notice of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- D. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- E. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.
- F. Duty to Provide Information. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
- G. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts or information.
- H. Signatory Requirements. All applications, reports or information submitted to the Director shall be signed and certified.
 - 1. All permit applications shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
 - c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.
 - 2. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the Director.

- b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- 3. Changes to authorization. If an authorization under paragraph IV.H.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph IV.H.2. must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
- 4. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- I. Availability of Reports. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Director. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.
- J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.
- K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

- L. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
- M. Transfers. This permit may be automatically transferred to a new permittee if:
1. The current permittee notifies the Director at least 30 days in advance of the proposed transfer date;
 2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 3. The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.
- N. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

Fact Sheet

United States Environmental Protection Agency
Region 10
Park Place Building, 13th Floor
1200 Sixth Avenue, WD-134
Seattle, Washington 98101
(206) 442-1214

Date:

Permit No.: ID-002540-2

PROPOSED REISSUANCE OF A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE POLLUTANTS PURSUANT TO THE PROVISIONS OF THE CLEAN WATER ACT

CYPRUS THOMPSON CREEK
P.O. Box 62
Clayton, Idaho 83227

has applied for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge pollutants pursuant to the provisions of the Clean Water Act. This fact sheet includes (a) the tentative determination of the Environmental Protection Agency (EPA) to reissue the permit, (b) information on public comment, public hearing and appeal procedures, (c) the description of the current discharge, (d) schedules of compliance and other conditions, and (e) a sketch or detailed description of the discharge location. We call your special attention to the technical material presented in the latter part of this document.

Persons wishing to comment on the tentative determinations contained in the proposed permit reissuance may do so by the expiration date of the Public Notice. All written comments should be submitted to EPA as described in the Public Comments Section of the attached Public Notice.

After the expiration date of the Public Notice, the Director, Water Division, will make final determinations with respect to the permit reissuance. The tentative determinations contained in the draft permit will become final conditions if no substantive comments are received during the Public Notice period.

The permit will become effective 30 days after the final determinations are made, unless a request for an evidentiary hearing is submitted within 30 days after receipt of the final determinations.

The proposed NPDES permit and other related documents are on file, may be inspected, and copies made at the above address any time between 8:30 a.m. and 4:00 p.m., Monday through Friday. Copies and other information may be requested by writing to EPA at the above address to the attention of the Water Permits Section, or by calling (206) 442-1214. This material is also available from the EPA Idaho Operations Office, 422 West Washington Street, Boise, Idaho 83702. A copying machine is available in the Seattle Office for public use at a charge of 20 cents per copy sheet. There is no charge if the total cost is less than 25 dollars.

I. Applicant

Cyprus Thompson Creek
P.O. Box 62
Clayton, Idaho 83227

NPDES Permit No.: ID-002540-2

II. Facility Location and Activity

The applicant (Cyprus) owns and operates an open pit molybdenum mine and concentration mill (SIC 1061) located 35 miles southwest of Challis, Idaho, in Custer County (Attachments #1 and #2). Process mill wastewater and mine drainage is contained in a tailings impoundment. Discharges consist of storm water runoff from waste rock dumps (outfalls #001 and #002) and storm water runoff from the mine access road (outfall #003).

III. Receiving Water

The mine site is drained by Thompson and Squaw Creeks, tributaries of the Salmon River (Attachment #2). Both drainages are classified by the State of Idaho for designated uses as agricultural water supply, secondary contact recreation and habitat for cold water biota and salmonid spawning. The Salmon River, at the points of confluence with Thompson and Squaw Creeks, has been classified as a Special Resource Water (Idaho Water Quality Standards and Wastewater Treatment Requirements, 1985, Section 1-2130).

IV. Background

The mine is located on property managed by the U.S. Forest Service (USFS), Challis National Forest, and the Bureau of Land Management. An Environmental Impact Statement (EIS) was published by the USFS on October 31, 1980. The selected alternative was that proposed by Cyprus and consisted of waste dumps located around the mine pit, and a "no discharge" tailings impoundment located in the upper Bruno Creek watershed.

An NPDES permit application was submitted by the company on April 14, 1980, for discharge of storm water runoff from waste rock dumps into Pat Hughes and Buckskin Creeks, both of which are tributaries of Thompson Creek. A permit was issued effective June 10, 1981, which expired on June 10, 1986. An application for permit reissuance was submitted on December 19, 1985. Due to uncertainties in the molybdenum market and a pending mine closure, the terms of the expired permit were continued in accordance with the Administrative Procedures Act [5 U.S.C. 558(c)]. On December 6, 1986, Cyprus announced a new mining plan based on an approximate 45% reduction in milling operations in hopes of assuring continued operation of the mine for an additional 3-5 years.

The Cyprus tailings impoundment is located at the headwaters of Bruno Creek, a tributary of Squaw Creek. Containment of mill tailings is accomplished by diversion of Bruno Creek headwaters and a seepage pump

back system. There is no discharge from the tailings impoundment to any surface waters. Seepage from the impoundment is collected in the seepage pond and pumped back to the impoundment. A water quality monitoring program outlined in the following sections has been implemented to quantify potential impacts from impoundment seepage.

V. Basis for Permit Limitations

Discharges of storm water runoff from waste rock disposal areas enter two small intermittent tributaries to Thompson Creek; Buckskin Creek and Pat Hughes Creek. Instream settling ponds have been constructed in both drainages, and are designed and maintained to provide for 24-hour detention of normal spring flows, in addition to a 10-year, 24-hour storm event. Previous permit conditions established suspended solids (TSS) and pH limitations, in addition to quarterly effluent monitoring requirements for cadmium, copper, zinc and arsenic. The permit also required turbidity monitoring at selected stations to verify compliance with State Water Quality Standards.

On December 3, 1982, EPA promulgated effluent guidelines for the Ore Mining and Dressing Point Source Category 40 CFR Part 440 (Subpart J). These guidelines establish specific technology based limitations for molybdenum mining and milling. Section 301 of the Clean Water Act requires that more stringent water quality based limitations be applied when the application of effluent guidelines interferes with the attainment or maintenance of existing water quality standards. In order to establish effluent limitations for the subject permit, EPA considered existing water quality data, Discharge Monitoring Reports (DMRs) submitted by the company, promulgated effluent guidelines, State Water Quality Standards and EPA Quality Criteria for Water (1986) for fresh water biota. Receiving water monitoring and DMR data are summarized on Attachment #3. Attachment #4 compares applicable Best Available Treatment (BAT) effluent guidelines limitations with water quality based criteria for toxic metals.

A. Outfalls #001 and #002 (Waste Rock Dumps)

1. Flow

Discharge volumes from outfalls #001 and #002 are not limited since flows from the in-line settling ponds vary with seasonal and climatic conditions and are not controlled by the permittee. Flows from outfall #001 typically occur during the spring and early summer during snowmelt, while discharges from outfall #002 usually occur year round.

Discharge and receiving water flows were used to establish water quality based effluent limitations. Flow data summarized on Attachment #3 show maximum flow periods to be the limiting basis for dilution calculations. During the low flow conditions, effluent discharges are either nonexistent or minimal. Application of the worst case flow conditions and the state's mixing zone policy of allowing only 25% of the volume of the receiving stream flow, results in a conservative 4.8 to 1 dilution (see Attachment #5). This dilution is used in calculating water quality based toxic effluent limitations.

2. Metals

Chronic and acute toxicity criteria (EPA, 1986) were used as the basis for calculating permit effluent limitations for arsenic, cadmium, lead, mercury, copper and zinc. EPA's "Permit Writer's Guide to Water Quality-Based Permitting for Toxic Pollutants" (February 1987), Table 3.1 was used to calculate the permit limits.

Attachment #7 contains the calculations for the final permit limits. The first two columns of numbers are the acute (criteria maximum concentration, CMC) and the chronic (criteria continuous concentration, CCC) criteria for the various metals from EPA's Water Quality Criteria (the "Gold Book").

Step 1 converts the CMC and CCC into acute and chronic waste load allocations (WLA), WLA_a and WLA_c , respectively. These allocations were derived as follows:

$$\begin{aligned} WLA_a &= (2) \times (CMC) \\ WLA_c &= (\text{Dilution Factor}) \times (CCC) = 4.8 \times (CCC) \end{aligned}$$

Step 2 converts the WLA_a and WLA_c to long term averages (LTA), LTA_a and LTA_c .

Step 3 selects the lower of LTA_a and LTA_c .

Step 4 derives the permit limit from the limiting LTA.

For this permit, only a daily maximum limit was calculated since the permit requires only monthly monitoring. The derived limits of Step 4 are then compared to the effluent guidelines, see Attachment #4. The more stringent of the two become the permit effluent limits.

The derived limit for mercury is 0.000057 mg/l or 0.057 ug/l. The lower detection level for mercury is 0.2 ug/l. Since the derived limit is less than the detection level, the permit limit for mercury is "non-detectable."

3. TSS:

Previous permit limitations of 20 mg/l daily average and 30 mg/l daily maximum will be retained in the reissued permit. These limitations are based on effluent guidelines and considered sufficient to assure compliance with water quality standards, based on past monitoring data.

4. pH:

pH is limited in the range 6.0 - 9.0, and reflects effluent guidelines. Past monitoring data has shown this limitation adequate to protect water quality standards.

B. Outfall #003 (Mine Access Road Stormwater Diversion)

The permittee will be required to monitor turbidity above and below the Bruno Creek access road stormwater settling ponds to assure compliance with State Water Quality Standards. This monitoring shall be performed

in accordance with requirements of the water quality monitoring program established by the USFS, IDHW-DOE and Cyprus (Attachment #8).

VI. Basis for Monitoring Requirements

The permittee will be required to comply with the following monitoring requirements for outfalls #001 and #002:

<u>Parameter</u>	<u>Frequency</u>
Flow	Daily
pH	Weekly
TSS	Weekly
Arsenic	Monthly
Cadmium	Monthly
Lead	Monthly
Mercury	Monthly
Copper	Monthly
Zinc	Monthly

The above monitoring requirements are considered adequate to characterize the permittee's discharge. Effluent quality from the tailings pond should not vary significantly from week to week. Therefore, metals monitoring will be monthly. An indication of variability in the effluent quality can be noted in a significant change in pH, TSS, and flow. Consequently, these parameters will be monitored more frequently.

Cyprus Thompson Creek Water Monitoring Program

In addition to the above referenced monitoring, the permittee shall continue to provide for water quality monitoring in accordance with the program agreed upon by the USFS, IDHW-DOE and the permittee. The major areas covered by the water quality plan are as follows:

1. Surface water quality of Thompson and Squaw Creek drainages.
2. Quantity and quality of effluent released from settling ponds on Pat Hughes and Buckskin Creeks.
3. Surface and groundwater quality in the tailings impoundment drainage basin.
4. Quality of groundwater developed as potable sources for workers at the mine site.
5. Fish and invertebrate populations of streams draining the active mine and mill operation areas.

Attachment #8 summarizes this monitoring program.

VII. Other Conditions

The permit is proposed to be effective for a period of five (5) years, and subject to modification should monitoring results indicate adverse water quality impacts.

United States Environmental Protection Agency
Region 10
Park Place Building, 13th Floor
1200 Sixth Avenue, WD-134
Seattle, Washington 98101
(206) 442-1214

NOTICE OF PROPOSED REISSUANCE OF A NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO
DISCHARGE TO WATERS OF THE UNITED STATES

and

NOTICE OF STATE CERTIFICATION

Public Notice No.: ID-002540-2

Public Notice Issuance Date:

Public Notice Expiration Date:

1. Applicant:

Cyprus Thompson Creek
P.O. Box 62
Clayton, Idaho 83227

NPDES Permit No.: ID-002540-2

The applicant (Cyprus) owns and operates an open pit molybdenum mine and concentration mill located 35 miles southwest of Challis, Idaho, in Custer County. Process mill wastewater and mine drainage is contained in a tailings impoundment. Discharges consist of storm water runoff from waste rock dumps (#001 and #002) and stormwater runoff from the mine access road (#003).

The mine site is drained by Thompson and Squaw Creeks, tributaries of the Salmon River. Both drainages are classified by the State of Idaho for designated uses as agricultural water supply, secondary contact recreation and habitat for cold water biota and salmonid spawning. The Salmon River, at the points of confluence with Thompson and Squaw Creeks, has been classified as a Special Resource Water (Idaho Water Quality Standards and Wastewater Treatment Requirements, 1985, Section 1-2130).

2. Tentative Determination

The Region 10 Office of the Environmental Protection Agency (EPA) has tentatively determined to reissue a discharge permit to the above listed applicant.

3. State Certification

This Notice will also serve as Public Notice of the intent of the State of Idaho, Department of Health and Welfare to consider certifying that the subject discharge will comply with the applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act. The NPDES permit will not be issued until the certification requirements of Section 401 have been met.

4. Public Comments

Persons wishing to comment on the tentative determinations contained in the proposed permit or wishing to request that a public hearing be held, may do so in writing, within 30 days of the date of this public notice. A request for a public hearing shall state the nature of the issues to be raised as well as the requester's name, address and telephone number. Comments must be received within this 30 day period to be considered in the formulation of final determinations regarding the application. All comments should include the name, address and telephone number of the commenter and a concise statement of the exact basis of any comment and the relevant facts upon which it is based. All written comments and requests should be submitted to EPA at the above address to the attention of the Director, Water Division.

Persons wishing to comment on State Certification should submit written comments within this 30 day period to the State of Idaho, Department of Health and Welfare, Statehouse, Boise, Idaho 83720.

5. Administrative Record

The proposed NPDES permit and other related documents are on file and may be inspected and copies made at the above address any time between 8:30 a.m. and 4:00 p.m., Monday through Friday. Copies and other information may be requested by writing to the EPA at the above address to the attention of the Water Permits Section, or by calling (206) 442-1214. This material is also available from the EPA Idaho Operations Office, 422 West Washington Street, Boise, Idaho 83702. A copying machine is available in the Seattle office for public use at a charge of 20 cents per copy sheet. There is no charge if the total cost is less than 25 dollars.

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Burt Doughty
Supervisor of Environmental Affairs
Cyprus Thompson Creek
P.O. Box 62
Clayton, Idaho 83227

Re: NPDES Permit No. ID-002540-2

Dear Mr. Doughty:

Enclosed for your information are copies of a draft National Pollutant Discharge Elimination System (NPDES) permit which we propose to reissue to the referenced facility, the public notice as it will appear in the local newspaper, and a fact sheet which outlines the basis for the permit.

The Public Notice initiates a 30-day public comment period. Following the close of the public comment period, we will consider the comments received in preparation of the final permit.

Technical questions regarding the permit may be referred to Wally Scarburgh of our Idaho Operations Office in Boise at (208) 334-1453.

Sincerely,

Harold E. Geren, Chief
Water Permits and Compliance Branch

Enclosures

cc: IDHW - DOE, Boise and Pocatello

bcc: Idaho Operations Office, EPA
8428N p22 7/20/87

Kawabata Parkin Mochnick

CYPRUS THOMPSON CREEK

TOXIC EFFLUENT LIMITATIONS SUMMARY
(All numbers are in mg/l)

1/

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